



**[Billing Code 4140-01-P]**

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**National Institutes of Health**

**Government-Owned Inventions; Availability for Licensing**

**AGENCY:** National Institutes of Health, HHS

**ACTION:** Notice

**SUMMARY:** The inventions listed below are owned by an agency of the U.S.

Government and are available for licensing in the U.S. in accordance with 35 U.S.C. 209 and 37 CFR Part 404 to achieve expeditious commercialization of results of federally-funded research and development. Foreign patent applications are filed on selected inventions to extend market coverage for companies and may also be available for licensing.

**FOR FURTHER INFORMATION:** Licensing information and copies of the U.S.

patent applications listed below may be obtained by writing to the indicated licensing contact at the Office of Technology Transfer, National Institutes of Health, 6011

Executive Boulevard, Suite 325, Rockville, Maryland 20852-3804; telephone: 301-496-

7057; fax: 301-402-0220. A signed Confidential Disclosure Agreement will be required to receive copies of the patent applications.

**SUPPLEMENTARY INFORMATION:** Technology descriptions follow.

### **GTF2I Mutations as Genetic Marker for Prognosis of Thymic Malignancies**

**Description of Technology:** The present invention describes the presence of a mutation in the general transcription factor Iii (GTF2I) gene in indolent thymic tumors that is rarely found in more aggressive thymic tumors.

The invention provides a method of determining the prognosis of thymic cancer in a patient by assaying (for example using PCR based methods) the genetic material obtained from the patient tissue to detect a mutation in at least one copy of GTF2I genetic sequence; and correlating the presence of a GTF2I mutation with the prognosis of a thymic cancer patient, the presence of the mutation indicating that the thymic cancer is indolent.

A genetic test will complement the diagnostic assessment, facilitate development of a molecular classification and assessment for the clinical management of thymic cancers.

#### **Potential Commercial Applications:**

- A diagnostic test kit for the prognosis and clinical management of thymic cancer.
- Clinical decision whether treatment is needed (for example, additional treatment after surgery).

- Therapeutic decision making, between an aggressive course of treatment for more aggressive cancers versus non aggressive treatment.

**Competitive Advantages:** The PCR based method is more advantageous and more objective than currently available histological classification and staging systems.

**Development Stage:**

- Early-stage
- In vitro data available
- In vivo data available (human)

**Inventors:** Guiseppe Giaccone and Yisong Wang (NCI)

**Publication:** Petrini I, et al. A specific missense mutation in GTF2I occurs at high frequency in thymic epithelial tumors. Nat Genet. 2014 Aug;46(8):844-9. [PMID 24974848]

**Intellectual Property:** HHS Reference No. E-109-2014/0 - US Provisional Application No. 61/975,222 filed April 4, 2014

**Licensing Contact:** Sabarni Chatterjee, Ph.D., MBA; 301-435-5587;  
[chatterjeesa@mail.nih.gov](mailto:chatterjeesa@mail.nih.gov)

**Collaborative Research Opportunity:** For collaboration opportunities, please contact Dr. Guiseppe Giaccone at [gg496@georgetown.edu](mailto:gg496@georgetown.edu).

## **Systems and Devices for Training and Imaging an Awake Test Animal**

**Description of Technology:** The invention pertains to an apparatus and training system for rodents to maintain its head substantially motionless during an imaging procedure. The system includes a frame defining an enclosure for enclosing an animal

therein during the imaging procedure which has a head post attached to the head of the animal and a treadmill having a plurality of rollers that the animal walks on such that one or more of the plurality of wheels rotate when the animal is in walking motion and stop rotating when the animal is in a substantially motionless state. This arrangement trains the animal to remain substantially motionless when disposed within an imaging apparatus. This invention permits prolonged imaging of awake rodents with minimal confinement and reduces stress.

**Potential Commercial Applications:**

- Imaging test rodents
- Imaging pharmacological agent distribution in rodents
- Imaging the therapeutically effects of pharmacological agent

**Competitive Advantages:** Imaging while animal is awake.

**Development Stage:**

- Early-stage
- Prototype

**Inventors:** Hanbing Lu, Yihong Yang, Elliot Stein (all of NIDA)

**Intellectual Property:** HHS Reference No. E-043-2015/0 - US Patent

Application 14/589,725 filed January 5, 2015

**Licensing Contact:** Michael Shmilovich; 301-435-5019;

[shmilovm@mail.nih.gov](mailto:shmilovm@mail.nih.gov)

**Collaborative Research Opportunity:** The National Institute on Drug Abuse is seeking statements of capability or interest from parties interested in collaborative research to further develop apparatus and/or the training system; commercialize with

pharmaceutical industry. For collaboration opportunities, please contact Vio Conley, M.S. at [conleyv@mail.nih.gov](mailto:conleyv@mail.nih.gov).

### **Miniature System for Manipulating Small Animals in High-Throughput Screening Small Molecules**

**Description of Technology:** The invention pertains to a miniaturized plating and feeding system based on a 96-well microplate base and is intended to reduce manipulation of organisms as well as amounts of test drug/anesthetic, thereby mitigating waste. The kit comprises a feeder plate, transfer adaptor and receiver plate. The feeder plate is defined by, for example, a plastic 96-well plate with rounded wells. The rounded bottoms can dispense to or permit access to the test organism of liquid food or drug through about 7 holes of approximately 350 microns in diameter. A top portion of the well provides test organisms (e.g., drosophila, daphnia) with sufficient space to enjoy normal life-cycles without confinement stress. The feeder plate includes means for interfacing with complementary components of the transfer and receiver plates through receiving holes and complementary dowels or pins. A transfer adapter allows the interconnection of the feeder plate to the receiver plate. The transfer plate can be configured to be square or rounded for the transfer of organisms from the feeder plate to the receiver plate.

#### **Potential Commercial Applications:**

- Drug Development
- Toxicity Studies
- Drug Design

**Competitive Advantages:**

- Small animals
- High Throughput
- Space efficiency
- Resource economy

**Development Stage:**

- Early stage
- Prototype

**Inventors:** Maria De Los Angeles Jaime and Brian Oliver (NIDDK)

**Intellectual Property:** HHS Reference No. E-034-2015/0 - US Provisional

Application No. 62/080,181 filed November 14, 2014

**Licensing Contact:** Michael Shmilovich, Esq.; 301-435-5019;

[shmilovm@mail.nih.gov](mailto:shmilovm@mail.nih.gov)

**Collaborative Research Opportunity:** The National Institute of Diabetes and Digestive and Kidney Diseases is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate or commercialize High-Throughput Small Animal Manipulation for Drug Design. For collaboration opportunities, please contact Marguerite J. Miller at [millermarg@niddk.nih.gov](mailto:millermarg@niddk.nih.gov).

This abstract replaces one published on Thursday, January 29, 2015 (80 FR 4935) to correct the patent application filing date.

Dated: March 12, 2015

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Richard U. Rodriguez, M.B.A.

Acting Director

Office of Technology Transfer

National Institutes of Health

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